

TECHNICAL UNIVERSITY OF GABROVO
FACULTY OF MECHANICAL AND PRECISION ENGINEERING

Endorsed with Academic Council resolution
Record № 9 dated 29.05.2012

Approved by
Rector /s/

QUALIFICATION REFERENCE

Degree course: **TEXTILE DESIGN, TECHNOLOGY AND EQUIPMENT**
Educational-qualification degree: **BACHELOR**
Field of higher education: **TECHNICAL SCIENCES**
Professional trend: **MACHINE ENGINEERING**
Professional qualification: **MACHINE ENGINEER**

ANNOTATION

This qualification reference specifies the vocational purpose of Bachelor degree holders in Textile design, technology and equipment (TDTE) from professional trend “Machine engineering” as well as the training requirements for their professional preparation.

VOCATIONAL PURPOSE

Bachelor engineers in TDTE receive higher education that is consistent with modern European requirements for wide range of career opportunities in leading textile companies where they can do well as researchers, designers, product engineers, maintenance and service engineers or serve as instructors in spinning, weaving, hosiery, ready-made clothes production or in factories for other textile materials)

TRAINING REQUIREMENTS

Machine engineers in TDTE acquire sufficient amount of skills to:

- do research of markets for textile products and plan customer oriented production;
- employ in practical terms all acquired knowledge in fashion design of knitwear and dress-making goods;
- make use, in their practice, of the latest achievements in textile science , technology and equipment;
- organize and manage production processes in spinning, weaving, knitwear and dressmaking;
- conduct experimental investigation and research, and develop technical documentation;
- design new products with modern CAD systems;
- develop modern technologies for production of yarns, fabrics and knitted goods;

- monitor and manage production quality;
- organize and manage a business of their own.

AREAS OF PROFESSIONAL REALIZATION

Successful graduates of the Bachelor degree course in TDTE are qualified for work in all types of textile enterprises and affiliations.

They also possess a competitive edge on the labor market not only as specialists in clothing and textile, but as machine engineers who are qualified for holding managerial and executive positions in the field

of manufacture ; perform well as textile and clothing designers, pedagogues and researchers.

The level of their academic training allows them to hold positions in the areas which require a university degree in TDTE in home and world economy branches dealing with textile and clothes making industry.

Endorsed with Faculty Council resolution, Record № 5 dated 15.05.2012.

Department Chair /s/

Dean /s/

TECHNICAL UNIVERSITY OF GABROVO
FACULTY OF MECHANICAL AND PRECISION ENGINEERING

Endorsed with Academic Council resolution
Record No 9 dated 29.05.2012

Approved by
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Updated with Academic Council resolution
Record No 6 dated 03.02.2015

CURRICULUM

Degree course: **TEXTILE DESIGN, TECHNOLOGY AND EQUIPMENT**

Academic degree: **BACHELOR**

Higher education area: **TECHNICAL SCIENCES**

Professional trend: **MACHINE ENGINEERING**

Professional qualification: **MACHINE ENGINEER**

Form of training: **FULL-TIME**

Duration of training: **4 /FOUR/ YEARS**

№	SUBJECTS TAUGHT	FORMS OF ASSESSMENT E - EXAMINATION CA – CONTINUOUS ASSESSMENT	COURSE-WORK	WORKLOAD IN NUMBER OF ACADEMIC HOURS				WEEKLY DISTRIBUTION	TYPE OF SUBJECT	ECTS CREDITS
				LECT-URES	SEMI-NAR CLASS-ES	LABORATORY CLASSES	TOTAL	L + SC + LC		
1	2	3	4	5	6	7	8	9	10	11
	<i>First Semester</i>									
1.	Calculus, part 1	E		30	30	0	60	2+2+0	C	5/2.3
2.	Informatics	E	CW	30	0	30	60	2+0+2	C	6/2.3
3.	Chemistry	E		30	0	15	45	2+0+1	C	4/1.7
4.	Engineering Graphics I	CA	CW	15	0	30	45	1+0+2	C	5/1.7
5.	Materials Science	E		30	0	30	60	2+0+2	C	6/2.3
6.	Placement			0	0	30	30	0+0+2	C	1/1
7.	Foreign Language			0	30	0	30	0+0+2	E	3/1.1
8.	Physical Education			0	(30)	0	(30)	(0+2+0)	E	(3/1.1)
	<i>First year, first semester</i>	4 E 1CA	2CW	135	60	135	330	9+4+9=22		30/12.4

1	2	3	4	5	6	7	8	9	10	11	
Second Semester											
9.	Calculus, part 2	E		30	30	0	60	2+2+0	C	5 / 2.3	
10.	Physics	E		30	0	30	60	2+0+2	C	5 / 2.3	
11.	Mechanics, part 1	E	CW	30	30	0	60	2+2+0	C	6 / 2.3	
12.	Technology of Engineering Materials	E		30	0	30	60	2+0+2	C	6 / 2.3	
13.	Engineering Graphics II		CA	CW	0	0	30	30	0+0+2	C	4 / 1.1
14.	Placement			0	0	30	30	0+0+2	C	1/1	
15.	Foreign Language		CA		0	30	0	30	0+2+0	E	3/1.1
16.	Physical Education			0	(30)	0	(30)	(0+2+0)	E	(3/1.1)	
First year, second semester		4 E	2CA	2 CW	120	90	120	330	8+6+8=22		30/12.4
Third Semester											
17.	Calculus, part 3	E		30	30	0	60	2+2+0	C	5/2.3	
18.	Mechanics, part 2	E	CW	30	0	30	60	2+0+2	C	5/2.3	
19.	Strength of Materials	E	CW	45	15	15	75	3+1+1	C	7/2.8	
20.	Fluid Mechanics		CA		30	0	15	45	2+0+1	C	4/1.7
21.	Electrical Engineering and Electronics	E		30	0	30	60	2+0+2	C	5/2.3	
22.1	Project Management		CA		30	15	0	45	2+1+0	E	4/1.7
22.2	Industrial Marketing		CA		30	15	0	45	2+1+0	E	4/1.7
23.	Physical Education			0	(30)	0	(30)	(0+2+0)	E	(3/1.1)	
24.	Foreign Language - specialized course			0	30	0	30	0+2+0	O	3/1.1	
Second year, third semester		4 E	2CA	2 CW	195	60	90	345	13+4+6=23		30/13.1
Fourth Semester											
25.	Theory of Machines and Mechanisms		CA	CW	30	15	15	60	2+1+1	C	6/2.3
26.	Metrology and Instrumentation	E		30	0	30	60	2+0+2	C	5/2.3	
27.	Textile Materials Science	E		45	0	30	75	3+0+2	C	7/2.8	
28.	Machine Elements	E		45	0	30	75	3+0+2	C	7/2.8	
29.	Thermodynamics	E		30	0	30	60	2+0+2	C	5/2.3	
30.	Physical Education			0	(30)	0	(30)	(0+2+0)	E	(3/1.1)	
31.	Foreign Language - specialized course		CA		0	30	0	30	0+2+0	O	3/1.1
32.	Work Placement, part 1			0	0	0	(120)		C	(4/0)	
Second year, fourth semester		4 E	1CA	1 CW	180	15	135	330	12+1+9=22		30/12.5

1	2	3	4	5	6	7	8	9	10	11	
	<i>Fifth Semester</i>										
33.	Spinning Machines and Processes	E		45	0	30	75	3+0+2	C	6/2.8	
34.	Machines and Processes in Weaving	E		45	0	30	75	3+0+2	C	6/2.8	
35.	Machines and Processes in Knitting Manufacture	E		45	0	30	75	3+0+2	C	6/2.8	
36.	Machines and Processes in Clothing Manufacture	E		45	0	15	60	3+0+1	C	6/2.3	
37.	Textile Testing		CA	30	0	15	45	2+0+1	C	4/1.7	
38.	Machine Elements - project		CA						C	2/0	
39.	Economics of Industrial Enterprise		CA	30	15	0	45	2+1+0	O	4/1.7	
	<i>Third year, fifth semester</i>	4E	2CA		210	0	120	330	14+0+8=22	30/12.4	
	<i>Sixth Semester</i>										
40.	Chemical Technology of Textile Machine	E		45	0	30	75	3+0+2	C	7/2.8	
41.1	Theoretical Basis of Spinning Manufacture	E	CW	45	0	30	75	3+0+2	E	6/2.8	
41.2	Knitwear Design and Construction	E	CW	45	0	30	75	3+0+2	E	6/2.8	
42.1	Design and Construction of Fabrics	E	CW	45	0	30	75	3+0+2	E	6/2.8	
42.2	Clothes Design and Tailoring	E	CW	45	0	30	75	3+0+2	E	6/2.8	
43.	Color Studies and Graphical Tools		CA	30	0	15	45	2+0+1	C	4/1.7	
44.	Textile Factory Design	E		30	0	30	60	2+0+2	C	5/2.3	
45.	Textile Factory Design - project		CA						C	2/0	
46.	Work Placement, part 2			0	0	0	(120)		C	(4/0)	
47.	Enterprise Planning and Forecasting		CA	CW	30	15	0	45	2+1+0	O	4/1.7
	<i>Third year, sixth semester</i>	4E	2CA	2CW	195	0	135	330	13+0+9=22	30/12.4	
	<i>Seventh Semester</i>										
48.1	Spinning Machines Design	E		45	0	30	75	3+0+2	E	6/2.8	
48.2	Knitting Machines Design	E		45	0	30	75	3+0+2	E	6/2.8	
49.1	Loom Design	E		45	0	30	75	3+0+2	E	6/2.8	
49.2	Sewing Machines Design	E		45	0	30	75	3+0+2	E	6/2.8	
50.	Basics of Computer Aided Design of Textile Machines		CA	30	0	30	60	2+0+2	C	5/2.3	
51.	Textile Machines Dynamics	E		CW	30	0	30	60	2+0+2	C	6/2.3
52.	Manufacturing Processes in the Production of Non-woven Fabric	E		30	0	30	60	2+0+2	C	5/2.3	
53.	Course Project of Subject 48.1 (49.1) or 48.2 (49.2)		CA						E	2/0	
	<i>Fourth year, seventh semester</i>	4E	2CA	1CW	180	0	150	330	12+0+10=22	30/12.5	

1	2	3	4	5	6	7	8	9	10	11
	<i>Eighth Semester</i>									
54.	Operation and Repair of Textile Machines	E		30	0	30	60	3+0+3	C	5/2.3
55.	Automation of Manufacturing Processes in Textile Industry	E		30	0	30	60	3+0+3	C	5/2.3
56.	Fashion and Clothing Design	E		30	0	20	50	3+0+2	C	4/1.9
57.	Safety Engineering	E		20	0	10	30	2+0+1	C	2/1
58.	Pre-graduation apprenticeship									4/0
59.	Graduation Thesis Work									10/0
	<i>Fourth year, eighth semester</i>	<i>4E</i>		<i>110</i>	<i>0</i>	<i>90</i>	<i>200</i>	<i>11+0+9 =20</i>		<i>30/7.5</i>
	<i>Total for the entire course of study</i>	<i>32E 12CA</i>	<i>10CW / 3CP</i>	<i>1325</i>	<i>225</i>	<i>975</i>	<i>2525</i>			<i>240/95.2</i>

Note: The numbers quoted in column 11 under the abbreviations T / C refer to: T – total number of credits, C – credits from contact hours.

ABBREVIATIONS USED

C – compulsory subjects

E – elective subjects

O – optional subjects

SUBJECTS		WORKLOAD	
Type	Number	Periods	%
C	43	2120	84
E	12	405	16
TOTAL:		2525	100
O	4	150	5,9

Endorsed with Faculty Board resolution, Record № 5 dated 15.05.2012

Updated with Faculty Board resolution, Record № 1 dated 28.01.2015

Department Chair /s/

Dean /s/